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### **If you don't have anything nice (or interesting) to say, don't say anything at all**

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**If you don't have anything nice (or interesting) to say, don't say anything at all**  
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Communication depends in part on the hope that people will tell us things we're interested in with language providing a channel by which speakers can convey, among other things, newsworthy and informative messages [1,2]. Despite this, research often emphasises the role of predictability, showing that comprehenders make fast and sophisticated use of knowledge about typical situations to shape their expectations about upcoming words in fine-grained and context-driven ways [3,4,5,6,7]. This new study contrasts these two dimensions, distinguishing knowledge about situation plausibility from knowledge about what people actually choose to talk about.

The question is one about modelling: What if an emphasis on event plausibility misses part of the picture? Can models be adapted to simultaneously incorporate expectations for newsworthiness alongside (and related to) expectations for event plausibility? The intuition is that listeners track the plausibility of situations in part to help them guess what a speaker is likely to select as a message worth conveying (e.g., a unicorn is rare but if one appeared, you'd be likely to mention it). The likelihood of mention is thus predicted to rise with the improbability of the situation. Indeed, recent models of the context-dependent meaning of gradable adjectives like *tall* or *big* [8,9] assume that the cost of uttering a (positive form) adjective has to be traded-off against the prior probability of the actual degree (height, size, etc.) of the object in question, thus giving rise to a meaning of, say, *tall* similar to "taller than the minimal point where the surprisal of seeing a person that tall licenses that the speaker has not said nothing at all". Comprehenders in fact do show surprisal for content that is too uninformative if they are expecting novelty [10,11], suggesting they are predicting upcoming words based in part on the simple fact that a speaker has chosen the current message as one worth saying out loud. To test if comprehenders use a speaker's choice to speak in guessing upcoming words, we compare their guesses in a sentence about what a character knows/believes and a sentence about what that the character has said.

In an offline task, participants (N=90) read short prompts describing two characters and were asked to select one of two values to fill in the blank about what one character would **think** or **announce** (see (1)). The prompts were adapted from a study on *a priori* expectations about quantities [12]. The two numeric values were selected via an initial study (N=31) using these materials, based on participants' free responses to a fill-in-the-blank prompt similar to (1a). The two values for each item corresponded, somewhat arbitrarily, to one value slightly above that item's mean ( $\text{mean} + 1/5 \times \text{standard deviation}$ ) and one farther above the mean ( $\text{mean} + 4/5 \times \text{standard deviation}$ ). Both values were 'plausible' in that they represented values in the range posited by previous participants' fill-in-the-blank responses, but if the mean can be taken to be the expected value, the larger values were less probable (and therefore more newsworthy).

The binary outcome of participants' forced-choice selection (small vs large value) was analyzed using an LMER model (maximal RE structure). As predicted, the **announce** condition yielded more selections of the larger value than the **think** condition ( $p < 0.01$ ). Figure 1 shows that a preference for the smaller value (the one closer to the mean) in the **think** condition shifts to a 50-50 split between the smaller and larger values in the **announce** condition. The fact that the **think** condition does not map uniformly to the lower value may reflect participants' sensitivity to the possibility that the **think** sentences have been selected as utterances to appear in the task and thus may be expected to contain information that is (minimally) interesting enough to utter.

The results confirm that people can use real-world knowledge to estimate probable situations. Furthermore, such guesses are shown to guide their estimates of what kind of messages would be worth uttering. A sufficient model would use a situation's probability to determine its likelihood of mention alongside the probability that the situation might occur in the first place. Possible extensions include context manipulations to alter the estimation of the likelihood of mention (e.g., adult- vs child-directed speech) or the real-world probabilities (e.g., fiction vs non-fiction genres).

(1) Sample item with **think/announce** manipulation

- a. Judith is a woman from the US.  
Judith has a brother, Bill.  
Bill **thinks** that Judith has \_\_\_\_ Facebook friends. ☐ 207 ☐ 268
- b. Judith is a woman from the US.  
Judith has a brother, Bill.  
Bill **announced** to me that Judith has \_\_\_\_ Facebook friends. ☐ 207 ☐ 268

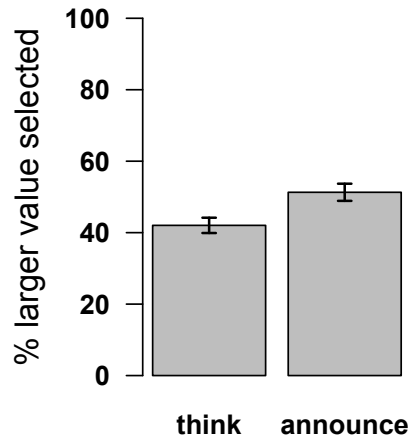


Figure 1. Selection of larger value in forced-choice task across **think/announce** conditions. Error bars represent standard error of the mean.

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